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February 12, 2005

Louisville Metro Air Pollution Control Board
850 Barrett Avenue
Louisville, Kentucky 40204

Re: Comments Regarding Proposed Regulations Dated January 10, 2005

Dear Air Pollution Control Board:

I have been a professional in the field of air pollution control for 35 years at EPA Region IV, as Director of the Indianapolis Air Pollution Control Division, and locally since 1977 as Air Pollution Control Officer of this Board, in consulting practice with three international consulting firms and finally founding Kentuckiana Engineering. I am a Professional Chemical Engineer and a Certified Industrial Hygienist. The purpose of this submittal into the public record is to respond to statements and perceptions regarding the control of air toxic emissions in Jefferson County, and to provide some observations regarding the potential administrative burden of the proposed regulations currently proposed for adoption by the Air Pollution Control Board.

In public meetings prior to opening of the public comment period and during the public comment period, several misconceptions have been voiced by the Courier Journal newspaper, the staff of the LMAPCD, members of the Air Pollution Control Board and by various members in Jefferson County government regarding the state of control of air toxic emissions in our community. I wish to highlight a few of these misconceptions and provide my observations as to why I think they are misconceptions. I wish also to provide a few observations of my own regarding the impact the proposed regulations may have on the regulated community and the LMAPCD staff.

Misconception #1 – EPA has done little to control air toxic emissions in Jefferson County.

EPA's 40 CFR 63 contains regulations applicable to over 150 source categories to impose Maximum Achievable Control Technology (MACT), many of which apply to sources here in Jefferson County. In fact, all of the Title V facilities in Jefferson County and many of the FEDOOP facilities have had to reduce emissions of 188 Hazardous Air Pollutants (HAPs) because of these regulations, including reductions in equipment leak emissions, stack emissions and implementation of operational controls. All have had to greatly increase their administrative efforts to track and retain measurement data, make reports and determine frequent compliance with hundreds of pages of federal regulations comparable in complexity to the IRS Code. Many Jefferson County industries met the

MACT regulations ahead of schedule and at great expense. Most of the TACs proposed for regulation by LMAPCD have already been reduced significantly by compliance with the EPA MACT regulations since 1992, regulations which LMAPD has adopted by reference and inserted in great detail in all of the affected industries' permits in Jefferson County. Permits which the LMAPCD staff must write and currently enforce.

Misconception #2 – Louisville Doesn't Control Air Toxics Yet

This has been implied in Board meetings and meetings around town by simply ignoring the array of air toxic regulations already on the books in Jefferson County. Compared to the state and local programs listed on a table provided by staff to the Board which summarizes other programs' air toxics regulations, Jefferson County regulates more air toxics than anyone else already (a summary of LMAPCD regulations was not put on the table for comparison purposes). In addition to having adopted all of EPA's MACT regulations, including detailed provisions in facility Title V permits, LMAPCD also regulates some 700 air toxics under Regulation 5.12 and 10 more under the 40 CFR 61 NESHAP standards.

It has also been repeated that the present air toxics regulations are not effective (see comment on MACT below). Regulations 5.11 and 5.12 have been in effect since 1987 and are presently enforced with stringent toxic air pollutant (TAP) emission limits, control technology requirements and dispersion modeling-based ambient limits in every permit, not just major source permits. These two regulations have resulted in vast pollution prevention programs, intense scrutiny of raw material usage and raw material purchasing controls throughout the county. Even the most minor facility has air toxic emission limits imposed in its construction and operating permits.

Lastly, controls on gasoline stations (Stage 1 and 2 vapor recovery), controls on all VOC storage tanks over 250 gallons, controls on all parts cleaners, controls on all dry cleaners and controls on all sources of VOCs requiring RACT and BACT levels of control add multiple layers of protective air toxic emission limitations.

Adding up, the existing air toxics control program in Jefferson County includes MACT control levels on over 150 source categories including all industrial boilers, VOC controls on almost every conceivable emission source, Board Orders on several point sources specifically to reduce TAC emissions as a result of the West End monitoring study, controls on emissions of 188 HAPs in all Title V and most FEDOOP facilities, controls 10 NESHAP pollutants through specific programs developed decades ago, and controls emissions of over 700 TAPs from every permitted source, even tiny ones. The misconception is there, and I hope the Board acknowledges that the LMAPCD is already

implementing a very stringent and comprehensive air toxics control program that has produced substantial emission reductions and pollution prevention.

Misconception #3 – MACT regulations are out of date and current technology can get better emission reductions.

In meetings, staff have made comments along the lines that control technology can get better reductions in emissions than the control efficiencies specified in the MACT requirements. This is true in an absolute sense because one can always shoot for and achieve 100% control of emissions, if one does not consider the cost of such controls, their operating expense and their cost-effectiveness in reducing emissions. EPA's MACT control requirements acknowledge and have considered cost-effectiveness in its control levels, as mandated by Congress in the Clean Air Act of 1990. Without consideration of cost-effectiveness, technologically available controls can achieve greater reductions if applied to the emission point. But in effect, without cost-effectiveness consideration, emission points will become economically unfeasible and industry will have no option for reducing emissions other than to shut the process down, move it elsewhere in the US or even to the next county where cost-effectiveness is acknowledged. As one climbs the ladder of control efficiency, costs rise geometrically as 100% is approached. The MACT regulations account for this effect and have been thoroughly researched over the years by top technical professionals to present the maximum controls economically feasible for each source category regulated. In recent cost-effectiveness studies for sources in Jefferson County that our firm has performed, the proposed TAC regulation best cost-effectiveness ranged from $35,000 to $1,600,000 per ton of air toxic. This far exceeds LMAPCD's cost-effectiveness benchmarks to date, and presents am unreasonable expectation that risk reduction can be obtained at any cost.

Misconception #4 – Louisville Air Is the Worst In the US

A few persons quoted by the Courier-Journal have said this, and the Courier-Journal reminds us in almost every new report it creates. The fact is that the EPA NATA Data Study classified over 100 counties in the US as "highest risk". Of course, these counties, including Jefferson County, were all the major urban areas of the country. Second, there have been other ambient monitoring studies, even in Kentucky, finding similar results and similar pollutants in ambient air at similar concentrations. What doesn't seem to make the news or is made clear in public meetings is that the baseline carcinogenic risk in ambient air is 48 in a million, that the base cancer fatality rate in the US is 30-40%, and that the EPA and eight Great Lakes States estimate mobile source related emissions of butadiene and benzene far outstrip stationary source emissions. It is unfortunate that the

news media has painted us as a dirty city. I believe we are no more at risk than other large urban areas based on actual air quality measurements.

Misconception #5 – The Proposed Regulations Are No More Than What Is Being Implemented Elsewhere

This would be true only if you would allow taking the most stringent pieces of each of several state regulations and rolling them into one regulation counts as being implemented elsewhere. The proposed regulations pile conservativeness upon conservativeness unto the point that it will be very difficult for any of the regulated sources to comply with all of the provisions. In the review of five facilities so far by our firm, none are able to comply with all of the various risk levels being proposed. Although some emission points can comply, we haven't seen any facility where all emission points comply and the facility complies as a whole with the cumulative risk standard.

Some have said that if every industry could comply, then the regulations must be too loose. Well, if no industry can comply, would that mean the regulations are too stringent?

Misconception #6 – There Is Enough Capacity to Perform the Tasks Required in the Proposed Regulations

Although the procedures for the dispersion modeling required is understandable by the most technical people, that does not mean it will be easily doable by the deadlines proposed. We estimate there will be over 300,000 dispersion modeling analyses required by the proposed regulations. This estimate is based on the following calculation:

173 Title V and FEDOOP Facilities X 10 Emission Points/Facility X 100 MSDS/Facility X 2 TACs/MSDS = 346,000 single point single TAC compliance demonstrations + 173 Facilities X 100 MSDS X 2 TACs/MSDS = 34,600 Facility-wide all TACs compliance demonstrations = 380,600 total compliance demonstrations due by December 31 for Category 1 and 2 TACs.

If it only takes four hours for each emission point/TAC permutation to go through the facility's MSDSs (most Title V and FEDOOP sources have several hundred to keep up with), tabulate maximum hourly and annual emissions for each TAC from each emission point, determine exemptions, input Tier 1, 2, 3 and/or 4 dispersion modeling parameters including building dimensions, run the models and prepare the submittal to LMAPCD, that is 1,522,400 person hours of effort due by December 31, 2005 for Category 1 and 2

TACs. If consultants only charge $100 per compliance demonstration, that would be $38,060,000 in fees between now and December. I do not believe there is that much manpower available in the consulting and industrial community between now and December.

Now, consider this. If the LMAPCD can review and approve each demonstration, revise facility permits accordingly for each emission point/TAC permutation and facility-wide total TAC cumulative risk determination, and provide public notice and response in just two hours each (that's twice as efficient as consultants and industry in this example), that is 761,200 person hours, or 365.9 person-years (assuming no vacation, sick time or holidays). I believe the TAC budget calls for two technical person-years to process the permitting part of the requirements. Further, if only 10% of emission point/TAC permutations result in the need for a variance, that would be 38,060 variances. If the Air Pollution Control Board could process 10 variances per Board meeting, that would be 3,806 Board meetings. At one Board meeting a month, it would take 317.2 years to get that done.

Lastly, where will the LMAPCD store this information? Each Tier 4 dispersion model generates roughly 400 pages of output to be reviewed. That would be 152,240,000 pages of dispersion modeling outputs. Plus of course, the write-ups that would be required to explain the modeling outputs and how the emission point/TAC permutation either complies or not with the risk goals and standards.

Although the introduction of de minimus exemptions is very helpful and a sure timesaver, it would appear there is still going to be a monumental quagmire of permitting and variances about to occur. The above estimates do not include, of course, all of the compliance demonstrations that will be triggered by changes in raw materials and equipment modifications throughout the county each year that would apply to all 1400 or so permitted sources. With at least 100,000 MSDS floating around the community, the new and modified process requirements may be even more burdensome to administer than the initial compliance demonstrations.

Thank you for consideration of my comments. I hope the Board will consider the above comments, even though I make no direct criticism or question specific provisions of the proposed regulations.

The Board should address specific air toxics issues of our community in an appropriate manner. I believe a focused approach to address the specific emission sources for each elevated TAC measured in the ambient air is appropriate, such as Board Orders with emission sources that reflect both technological and economically feasible solutions. I do not think the proposed regulations will address the 18 TACs of concern; dry cleaners,

gas stations, sewer systems and mobile sources accounting for half of them being exempt for now with no requirements set. The Board should consider spending the potential 365 person-years of staff time the proposed regulations would require more prudently on the 18 TACs of concern.

Sincerely yours,

Michael T. DeBusschere, P.E., CIH
President